

Johnson Lee

**Repealing Chapter 231 of Title 11 of the Minneapolis Code of Ordinances relating to Health and Sanitation: Public Swimming Pools.**

The City Council of The City of Minneapolis do ordain as follows:

Section 1. That Chapter 231 of the Minneapolis Code of Ordinances be and is hereby repealed.

**~~CHAPTER 231. PUBLIC SWIMMING POOLS\*~~**

~~\*Cross references: Swimming pool construction, Ch. 111; water, Ch. 509.~~

~~**231.10. Scope and purpose.** The provisions of sections 231.10 to 231.500 shall apply to all public swimming pools, including wading pools and special purpose pools as hereinafter defined, and all facilities incident thereto. The purpose of sections 231.10 to 231.500 shall be to provide a minimum standard for the design, construction, operation, and maintenance of such pools so that health and safety hazards will be minimized.~~

~~A swimming pool which is not capable of complying with the water quality provisions in section 231.400 of these rules must be modified to provide compliance.~~

~~**231.20. Definitions. Application.** The following definitions shall apply in the interpretation and enforcement of sections 231.10 to 231.500. The words "shall" and "must" as used herein indicates a mandatory requirement.~~

~~*Commissioner.* State commissioner means Minnesota Commissioner of Health or representative thereof. City commissioner means City of Minneapolis Commissioner of Health or representative thereof.~~

~~*Person* means any person, firm, partnership, association, corporation, company, governmental agency, club, or organization of any kind.~~

~~*Private residential swimming pool* means any constructed or assembled swimming pool or portable swimming pool which is used or intended to be used as a swimming pool in connection with group I occupancies as defined in the state building code, and available only to the family of the householder and his guests.~~

~~*Public swimming pool* means any swimming pool, other than a private residential swimming pool, intended to be used collectively by people for swimming or bathing, operated by any person as defined herein, whether he/she be owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for such use. Public swimming pools include, but are not limited to, those for parks, schools, motels, apartments, clubs, condominiums, hotels, subdivisions, private or public sports facilities, or the like.~~

~~*Spa pool* means a hot water pool intended for seated recreational use that includes a water agitation system in addition to the recirculation system. Spa pool is synonymous with the term "whirlpool."~~

~~Special purpose pool means a water slide plunge pool, wave pool, treatment pool, therapeutic pool, whirlpool or spa pool, or cold plunge.~~

~~Swimming pool means any structure, chamber, or tank containing an artificial body of water for swimming, diving, relaxation, or recreational bathing, including special purpose pools.~~

~~Wading pool means any pool used or designed to be used exclusively for wading or bathing and having a maximum depth of twenty four (24) inches.~~

~~**231.30. Submission of plans and specifications.** No public swimming pool shall be constructed, nor shall any such swimming pool, now or hereafter existing, used or intended for such use, be materially altered until complete plans and specifications therefore, together with such further information as the state commissioner may require, shall have been submitted to the Minnesota State Health Department in duplicate and approved by the state commissioner so far as sanitary and safety features are concerned. After such plans have been approved by the state commissioner, no modification affecting the sanitary or safety features thereof shall be made without approval of same commissioner.~~

~~Plans and specifications must include:~~

- ~~(A) The name of the facility, it's location and address, the name and address of the owner, and the name, address and telephone number of the organization or individual who prepared the plans and specifications.~~
- ~~(B) A site plan or floor plan, drawn to scale, showing the facility, dimensioned deck areas, fencing or other security provisions, toilet and shower areas, pool equipment location, and any other related facilities.~~
- ~~(C) Pool plans, drawn to scale, with top and profile views, including dimensions, and all equipment or appurtenances such as skimmers, gutters, inlets, drains, lights, diving boards, slides, ladders, steps, and handrails.~~
- ~~(D) A detailed recirculation system plan with all pipe sizing, fittings, valves, gauges, and equipment connections.~~
- ~~(E) A complete equipment list specifying manufacturers, model numbers, and sizes.~~
- ~~(F) The pool volume, surface area, and design recirculation rate.~~
- ~~(G) Deck and equipment room plans must include all drains and sumps, deck slopes, and air gaps at discharges to sewer from all deck drains, pool drains, and recirculation system drains.~~

~~The pool and facilities shall be built in accordance with the plans as approved unless approval of changes has been given in writing by the state commissioner. The owner or his/her agent shall notify same commissioner at the time of completion of the pool to permit adequate inspection of the pool and related equipment. The pool shall not be placed in operation until such inspection shows compliance with the provisions of sections 231.10 to 231.500~~

~~A separate plan submittal is required for each pool site. If construction of the swimming pool has not commenced within one (1) year of the plan approval date, the approval is no longer valid.~~

**231.40. Health and safety.** ~~Not more than the maximum design bather load as calculated in section 231.260 shall be permitted in the swimming pool at any one time. The design bather load shall be posted in a conspicuous location.~~

~~If plan approval is based on a specified special use of the pool, it must not be used for other uses without specified prior approval by the city commissioner.~~

~~No person having or suspected of having a communicable disease (such as but not limited to gastroenteritis, upper pulmonary infection or skin lesions) which could be transmitted through use of the pool shall work at or use any public swimming pool.~~

~~Access to the pool shall be controlled by fencing or other effective means acceptable to the state commissioner. Fencing shall meet the following criteria. The fencing shall effectively prevent the entrance of children and be without external hand or footholds that would enable a child to climb over it. The fencing shall be at least five (5) feet high except in wading pools which shall be at least forty-eight (48) inches high and entrances shall be equipped with a self-closing, latching gate which is capable of being locked. Existing forty-two (42) inches fences around wading pools may be kept in use until replaced. Existing four (4) foot high fences around pool may be kept in use until altered or replaced. Latches shall be at least four (4) feet above the ground on new installations except wading pool latches which shall be as high as possible. The maximum opening permitted in the fence, or clearance below, is two (2) inches. Chain link fence may be used if openings in the fabric do not exceed one and one-half (1 1/2) inches.~~

~~Instructions regarding emergency calls shall be prominently posted. Where a phone is not provided in the pool area, the sign must state the location of the nearest phone available, and the emergency number.~~

~~The maximum permitted water temperature in any pool is one hundred four (104) degrees Fahrenheit.~~

~~All containers used for chemicals shall be kept in a secured location, not accessible to the bathers, and shall be labeled with manufacturers complete label and stored in accordance with manufacturers label directions. Equipment room and storage areas shall be kept clean.~~

~~No animals are permitted within the pool enclosure.~~

~~Devices, equipment, or objects which could be used for climbing or swinging above the water surface other than complying diving boards, diving platforms, starting blocks, or slides are not permitted.~~

**231.50. Reserved.**

**231.60. Operator of the pool.** ~~No person shall operate any public swimming pool unless such swimming pool is under the supervision of a certified operator who shall be responsible for compliance with all provisions of sections 231.10 to 231.500 relating to pool operation, maintenance, and safety of bathers. Pool operators shall be certified by May 1, 1994 through city operated certification, by National Swimming Pool Foundation, or other certification as accepted by the city commissioner.~~

~~The operator of each pool shall keep a daily record of information regarding operation as specified in section 231.420, together with other data as may be required by the city commissioner.~~

**231.70. Water supply.** ~~The water supply serving the swimming pool and all plumbing fixtures including drinking fountains, hand washing facilities, and showers shall meet the requirements of the city~~

~~commissioner for potable water. Where strict compliance with the requirement that the water supply serving the swimming pool be of potable quality is not possible or reasonable, the city commissioner may grant a variance which does not endanger the health and safety of the users of the pool.~~

~~All portions of the water distribution system serving the swimming pool and auxiliary facilities shall be protected against backflow. Water introduced into the pool, either directly or to the recirculation system, shall be supplied through an air gap (Minnesota Plumbing Code, sections 4715.2000 to 4715.2170), or shall be protected by a suitable backflow preventer (Minnesota Plumbing Code, sections 4715.2000 to 4715.2170).~~

**231.80. Sewer system.** ~~The sewer shall be adequate to serve the facility, including bathhouse, locker room, and related accommodations, and shall conform to the standards of the state commissioner and the Minnesota Pollution Control Agency.~~

~~There shall be no direct physical connection between the sewer system and any drain from the swimming pool or recirculation system. Any swimming pool or gutter drain or overflow from the recirculation system when discharged to the sewer system, storm drain, or other approved natural drainage course shall connect through a suitable air gap or air break so as to preclude the possibility of backup of sewage or waste into the swimming pool or piping system. Valves and/or pumps used for draining swimming pools shall be sized or designed to prevent the surcharging of the sanitary sewer.~~

~~The sanitary sewer serving the swimming pool auxiliary facilities shall discharge into the public sewer system.~~

**231.90. Inspection.** ~~The city commissioner or his/her representative is authorized to conduct such inspections as deemed necessary to ensure compliance with all provisions of sections 231.10 to 231.500 and shall have right of entry, at any reasonable hour, to the swimming pool for this purpose.~~

**231.100. Construction materials.** ~~Swimming pools and all appurtenances thereto shall be constructed of materials that are inert, nontoxic to man, impervious, permanent, and enduring; which can withstand the design stresses; which will provide a tight tank with a smooth and easily cleaned surface, or to which a smooth, easily cleaned surface finish can be applied, and which may be finished in white or light color. Construction prohibited by this section would include, but is not limited to vinyl liner pools and wood construction of the tank.~~

~~Swimming pool finish, including bottom and sides, shall be of white or light colored material, nontoxic to humans, with a smooth finished surface, without cracks, bonded to the supporting members, excluding structural expansion joints.~~

**231.110. Design, detail, and structural stability.** ~~All swimming pools shall be designed and constructed to withstand all anticipated loading for both full and empty conditions. A hydrostatic relief valve and/or a suitable underdrain system shall be provided in areas having a high water table. The designing architect or engineer shall be responsible for the structural stability and safety of the pool.~~

~~No limits are specified for length and width of swimming pools, except that swimming pools used for competition should meet required dimensions, and the requirements for the diving area as shown in section 231.450 shall be observed. Consideration shall be given to shape from the standpoint of safety and the need to facilitate supervision of bathers using the pool.~~

~~The shape of any swimming pool shall be such that the circulation of pool water and control of swimmers' safety are not impaired. There shall be no underwater or overhead projections or obstructions which would endanger bather safety or interfere with proper pool operation.~~

All corners formed by the intersection of walls, and of walls and floors, shall be rounded, with at least a one (1) inch radius.

Fountains, sprays, or similar features may be approved by the state commissioner only in areas of two (2) feet or less of water depth.

Provisions shall be made for complete, continuous circulation of water through all parts of the swimming pool. All swimming pools shall have a recirculation system with necessary treatment and filtration equipment as required in this regulation. Nothing in this part shall prohibit the use of so-called flow-through type swimming facilities constructed in accordance with the rules of the state commissioner.

Wading facilities for children shall be physically separated from the swimming pool and be provided with a separate recirculation system.

**231.120. Depth of water in the pool.** The minimum depth of water in the swimming pool shall be three (3) feet except for special purpose pools. A zero (0) depth pool may be approved by the state commissioner only where continuous lifeguard service is provided, and it must have a barrier, such as stanchions and ropes to restrict access from the deck to the pool where the water depth is less than three (3) feet.

**231.130. New equipment.** All new equipment installed after the effective date of sections 231.10 to 231.500 shall comply with standards No. 50 of the National Sanitation Foundation, Circulation System Components, November 1985 or newer, certified copies of which are on file in the office of the City Clerk and City Commissioner.

**231.140. Depth markings and lines.** Depth of water shall be plainly marked in feet and inches on the edge of the deck or walk next to the pool, at maximum and minimum points, at the points of change of slope between the deep and shallow portions and at intermediate increments of depth, spaced at not more than twenty-five (25) foot intervals. This section does not prohibit the placement of depth markings on the pool wall which are in addition to those required on the deck.

Depth markings shall be numerals and letters of four (4) inches minimum height and of a color contrasting with the background. Markings shall be on both sides and ends of the pool. Lane lines or other markings on the bottom of swimming pools used for competition shall be a minimum of ten (10) inches in width and of a contrasting color.

Pools and sections of pools which do not comply with the depth requirements for diving in section 231.450 must have the words "No Diving" located between the depth markers on the deck. The words must be in legible letters not less than four (4) inches high and of a color contrasting with the background. This does not apply to spa pools, wading pools, or flume plunge pools.

Where a transition to a steeper bottom slope exceeding one (1) in ten (10) occurs the transition must be marked on the bottom and walls of the pool by a stripe of black or other contrasting color which is at least six (6) inches wide.

**231.150. Inlets and outlets.** (1) *Outlet.* All swimming pools shall be provided with an outlet at the deepest point to permit the pool to be completely and easily emptied. Openings must be covered by a proper grating which is not readily removable by bathers. Outlet openings of the grating in the floor of the pool shall be at least four (4) times the area of discharge pipe or provide sufficient areas so the maximum velocity of the water passing the grate will not exceed one and one-half (1 1/2) feet per second. The maximum width of grate openings shall be of one-half (1/2) inch. Where a single outlet is used, it must

~~be at least one hundred (100) square inches in size, or have an antivortex cover. In swimming pools with deep water at or near one end, multiple outlets shall be provided where the width of the pool is more than thirty (30) feet. In such cases, outlets shall be spaced not more than thirty (30) feet apart, nor more than fifteen (15) feet from side walls.~~

~~(2) *Inlets.* Inlets for fresh and/or repurified water shall be located to produce uniform circulation of water and to facilitate the maintenance of a uniform disinfectant residual throughout the entire swimming pool without existence of dead spots. Inlets from the circulation system shall be flush with the pool wall and submerged at least twelve (12) inches below the water level. No over the rim fill spout will be accepted unless located under a diving board or installed in a manner approved by the state commissioner so as to remove any hazard. Makeup water spouts shall terminate at least six (6) inches above the fill rim of the pool or surge tank.~~

~~(3) *Adjustable inlets.* Directionally adjustable inlets shall be located in conjunction with proposed methods of recirculation to provide effective and uniform circulation of the incoming water throughout the pool and prevent unnecessary dead spots. The maximum spacing of inlets shall be twenty (20) feet based on the pool perimeter. In swimming pools with surface areas greater than one thousand six hundred (1,600) square feet or length in excess of sixty (60) feet, side inlets shall be placed at fifteen (15) foot intervals around the entire perimeter. In any case, an adequate number of inlets shall be provided, properly spaced and located to accomplish complete and uniform recirculation of water and maintenance of a uniform disinfectant residual at all time. Each inlet shall be designed as an orifice subject to adjustment or shall be provided with an individual gate or similar valve to permit adjustment of water volume to obtain the best circulation.~~

~~**231.160. Slope of bottom.** The slope of the bottom of any portion of the swimming pool having a water depth of less than five (5) feet shall not be more than one (1) foot in ten (10) feet, and said slope shall be uniform. In portions with a depth greater than five (5) feet the slope shall not exceed one (1) foot in three (3) feet.~~

~~**231.170. Side walls.** Walls of a swimming pool shall be either vertical for water depths of at least six (6) feet; or vertical for a distance of three (3) feet below the water level, below which the wall may be curved to the bottom with a radius not greater than the difference between the depth at that point and three (3) feet, provided that vertical is interpreted to permit slopes not greater than one (1) foot, horizontally, for each five (5) feet of depth of sidewall (eleven (11) degrees from vertical).~~

~~A ledge along the pool wall within the pool is permitted only where necessary as part of the sidewall construction. It must be: at least two (2) feet six (6) inches below the water surface, not over four (4) inches wide, sloped into the pool, and marked to be easily visible.~~

~~**231.180. Overflow gutters.** Overflow gutters shall extend completely around the swimming pool except at steps or recessed ladders. The overflow gutter shall also serve as a handhold. This gutter shall be capable of continuously removing fifty (50) percent or more of the recirculated water and returning it to the filter. All overflow gutters shall be connected to the recirculation system through a properly designed surge tank. The total surge capacity of the system must be at least one (1) gallon per square foot of water surface. If some of the surge capacity is within the gutter system, the system must be able to carry fifty (50) percent of the recirculation flow while maintaining the surge capacity. Automatic water level control must be provided such that there will be automatic and continuous skimming at the gutter lip during quiescence. The gutter, drains, and return piping to the surge tank shall be designed to rapidly remove overflow water caused by recirculation, displacement, wave action, or other cause produced from maximum pool bathing load. Spacing of drainage outlets shall not be more than fifteen (15) feet. The opening into the gutter beneath the coping shall not be less than four (4) inches wide with a depth of at least three (3) inches. Where large gutters are used, they shall be designed to prevent entrances or~~

entrapment of bathers' arms or legs. The overflow edge or lip shall be rounded and not thicker than two and one-half (2 1/2) inches for the top two (2) inches. The overflow outlets shall be provided with outlet pipes which shall have a clear opening in the grating at least equal to one and one-half (1 1/2) times the cross sectional area of the outlet pipe.

Nothing in this section shall preclude the use of roll-out or deck-level type swimming pools. The design of the curb and handhold shall conform to standards set out in section 231.190, and the approval of the state commissioner shall be based on detailed review of this feature of construction and evaluated in the light of proposed use of the pool.

**231.190. Skimmers.** ~~(1) Provision for use of skimmers.~~ Skimmers are permitted on public swimming pools provided approved handholds are installed and sufficient motion to the pool water is induced by the pressure return inlets. At least one (1) skimming device shall be provided for each four hundred (400) square feet of water surface area or fraction thereof. Where two (2) or more skimmers are required, they shall be so located as to minimize interference with each other and to insure proper skimming of the entire pool surface. Handholds shall consist of bull-nosed coping not over two and one-half (2 1/2) inches thick for the outer two (2) inches, or be of an equivalent approved type. (If brick coping is used, it must be completely rounded on the pool side, and must have a one and one-half (1 1/2) to two (2) inch overhang. The coping brick must slope away from the pool at least one-half (1/2) inch over the length of the brick.) The handholds must be no more than nine (9) inches above the normal water line. Skimming devices shall be built into the pool wall, shall develop sufficient velocity on the pool water surface to induce floating oils and wastes into the skimmer from the water surface of the entire pool area, and shall meet the general specifications in subd. 2 to 5.

~~(2) Design.~~ The piping and other pertinent components of skimmers shall be designed for a total capacity of at least eighty (80) percent of the required filter flow of the recirculation system, and no skimmer shall be designed for a flow-through rate of less than thirty (30) gallons per minute. The skimmer shall be of sturdy, corrosion-resistant materials.

~~(3) Skimmer weir.~~ The skimmer weir shall be automatically adjustable and shall operate freely with continuous action to variations in water level over a range of at least four (4) inches. The weir shall operate at all flow variations as described in this part. The weir shall be of such buoyancy and design as to develop an effective velocity.

~~(4) Screen.~~ An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.

~~(5) Prevention of airlock.~~ The skimmer shall be provided with an equalizer pipe to prevent airlock in the skimmer suction line. It shall be sized to meet the capacity requirements of the filter and pump and shall in no case be less than two (2) inches in diameter. This pipe shall be located at least one (1) foot below the lowest overflow level of the skimmer. It shall be provided with a valve or equivalent device that will remain tightly closed under normal operating conditions, but will automatically open when the water level drops as much as two (2) inches below the lowest weir level. Equalizer pipe may be omitted on pools with automatic water level control and spa pools with less than one thousand (1,000) gallon capacity.

**231.200. Recirculation systems.** ~~(1) System.~~ A recirculation system, consisting of overflow gutters or skimmers, main drain(s), inlets, pumps, piping, filters, water conditioning, and disinfection equipment, and other accessory equipment shall be provided which will clarify and disinfect the swimming pool volume of water in six (6) hours or less, thus providing a minimum turnover of at least four (4) times in twenty-four (24) hours, except that the recirculation rate shall be increased to provide a two (2) hour turnover for wading and special purpose pools, unless a different rate is specified elsewhere in these

~~rules for a specific type of special purpose pool. (See 231.460, subd. 2). Diving pools may use a six (6) hour turnover in lieu of a two (2) hour turnover. Zero depth pools, when permitted, must have a four (4) hour turnover and utilize a system of bottom inlets in the shallow area.~~

~~The pumps, filter, disinfectant and chemical feeders, and related appurtenances shall be kept in operation at all times during the swimming season unless approved by the city commissioner.~~

~~The recirculation system shall include a strainer to prevent hair, lint, etc., from reaching the pump and filters. Strainers shall be corrosion-resistant with openings not more than one eighth (1/8) inch in size providing a free flow area at least four (4) times the area of the pump suction line and shall be readily accessible for frequent cleaning.~~

~~(2) *Piping.* All piping shall be designed to reduce friction losses to a minimum and to carry the required quantity of water at a maximum velocity not to exceed six (6) feet per second for suction piping, and eight (8) feet per second for discharge piping. Piping shall be of nontoxic material, resistant to corrosion, and able to withstand operating pressures. Pipes shall be identified by a color code, tags, or other acceptable markings.~~

~~(3) *Cleaning system.* A vacuum cleaning system which is capable of cleaning the entire swimming pool shall be provided, except that it is not required for special purpose pools with less than seventy-five (75) square feet of water surface.~~

~~(4) *Rate of flow indicator.* A rate of flow indicator, reading in gallons per minute, shall be installed and located, preferably on the swimming pool return line, so that the rate of recirculation and backwash rate will be indicated. The indicator shall be capable of flows measuring at least one and one-half (1 1/2) times the design flow rate, shall be accurate within ten (10) percent of true flow, and shall be easy to read.~~

~~(5) *Pumps.* Pumps shall be of adequate capacity to provide the required number of turnovers of swimming pool water as specified in this section, and whenever possible shall be so located as to eliminate the need for priming. If the pump or suction piping is located above the overflow level of the pool, the pump shall be self-priming. The pump or pumps shall be capable of providing flow adequate for the backwashing of filters. Under normal conditions the pump or pumps shall supply the recirculation rate of flow at a dynamic head of at least fifty (50) feet for pressure sand type filters or at least eighty (80) feet for pressure diatomaceous earth type filters.~~

~~(6) *Heaters.* Swimming pools equipped with heaters shall have a fixed thermometer in the recirculation line near the outlet to the pool.~~

~~(7) *Valves.* Valves shall be provided on main drain and skimmer lines to permit balancing of the recirculation flow.~~

**231.210. Ladders, recessed treads, and stairs.** ~~(1) *Where provided in the pool.* Steps or ladders shall be provided at the shallow end of the swimming pool if the vertical distance from the bottom of the pool to the deck or walk is over two (2) feet. Recessed steps or ladders shall be provided at the deep portion of the swimming pool, and, if the pool is over thirty (30) feet wide, such steps or ladders shall be installed on each side.~~

~~(2) *Steps.* Steps leading into the swimming pool shall be of nonslip design, and have a minimum tread of twelve (12) inches and a maximum rise or height of ten (10) inches. The leading edge of step treads must be identified by use of a contrasting color. There shall be no abrupt drop-off or submerged projections into the pool, unless guarded by handrails. At least one (1) sturdy handrail, reachable from~~



the pool bottom, must be provided for all steps. At least two (2) rails must be provided when the steps are over six (6) feet wide, or additional rails are needed to define the location of the steps.

~~(3) *Ladders.* Swimming pool ladders shall be corrosion-resistant and shall be equipped with nonslip treads. All ladders shall be so designed as to provide a handhold and shall be rigidly installed. There shall be a clearance of not more than five (5) inches nor less than three (3) inches between any ladder and the pool wall. If steps are inserted in the walls or if stepholes are provided, they shall be of such design that they may be cleaned readily and shall be arranged to drain into the pool to prevent the accumulation of dirt thereon. Stepholes shall have a minimum tread of five (5) inches and a minimum width of fourteen (14) inches.~~

~~(4) *Handrails.* Where stepholes or ladders are provided within the swimming pool, there shall be a handrail at the top of both sides thereof, extending over the coping or edge of the deck.~~

~~(5) *Diving boards.* Supports, platforms, and steps for diving boards shall be of substantial construction and of sufficient structural strength to carry safely the maximum anticipated loads. Steps shall be of corrosion-resistant material, easily cleanable, and of nonslip design. Handrails shall be provided at all steps and ladders leading to diving boards more than one (1) meter above the water. Platforms and diving boards which are over one (1) meter in height shall be protected with guard railings.~~

**231.220. Decks and walkways.** ~~A continuous deck, free from obstructions, at least five (5) feet (and preferably eight (8) or more feet) wide shall extend completely around the swimming pool except as permitted in 231.460 subp 7. item B. The deck shall be sloped away from the pool to drain and shall have a nonslip, nonabsorbent surface. Deck drains connected to the recirculation system or gutters shall be prohibited on outdoor swimming pools. In deck areas where carpeting is used, the deck shall be so designed and constructed as to provide adequate drainage and convey all water away from carpeted areas. The carpeting shall not, in any case, be permitted within ten (10) feet of the pool, unless it is outside the required deck area, and separated from the deck by an effective barrier. Wood decks are prohibited. A minimum ceiling clearance of seven (7) feet is required above all pool decks; however, greater heights are recommended. Where diving boards are provided, clearances must comply with section 231.230.~~

**231.230. Diving areas.** ~~The dimensions of the swimming pool and appurtenances in the diving area shall conform to section 231.450.~~

~~There shall be a completely unobstructed clear distance of sixteen (16) feet above the diving board measured from the center of the front end of the board, and this area shall extend at least eight (8) feet behind, eight (8) feet to each side, and sixteen (16) feet ahead of the measuring point.~~

**231.240. Starting blocks or platforms.** ~~Starting blocks or platforms located in pool areas not meeting the requirements for diving given in section 231.450 must be removed when the swimming pool is used for other than competitive swimming or training for competitive swimming. For new installations, all starting blocks or platforms must be located at a water depth of five (5) feet or greater.~~

**231.250. Swimming pool slides.** ~~Swimming pool slide construction and installation must comply with the United States Consumer Products Safety Commission Standards (Volume 41, No. 12) published in the Federal Register January 19, 1976.~~

**231.260. User loading.** ~~For the purposes of computing user loading, those portions of the swimming pool five (5) feet or less in depth shall be designated as "nonswimming" areas. Swimmer and bather capacity shall be determined as follows:~~

(A) One (1) person is permitted for each fifteen (15) square feet of pool water surface in the nonswimming area; defined as the area of the pool that is five (5) feet or less in depth.

(B) One (1) person is permitted for each twenty five (25) square feet of pool water surface in the swimming area; defined as the area of the pool that is greater than five (5) feet in depth.

(C) Three hundred (300) square feet of pool water surface area shall be reserved around each diving board, diving platform or slide, and this area shall not be included in computing the area of the swimming section.

The city commissioner shall make additional allowance for bathers in cases of swimming pools with extensive deck areas used by patrons for lounging or sunbathing provided there are adequate sanitary fixtures.

Spa pools must be limited to one (1) bather for each three (3) feet of seating space provided in the pool.

**231.270. Sand type filters.** (1) *Requirements.* The requirements in subdivisions 2 to 9 are equally applicable to either gravity or pressure sand type filters.

(2) *Pressure sand type filters.* Pressure sand type filters shall be designed for a filter rate of three (3) gallons per minute per square foot of bed area at time of maximum head loss, with sufficient area to meet the design rate of flow required by the prescribed turnover. The design filtration rate for high rate sand filters shall not be in excess of twenty five (25) gallons per minute per square foot of bed area. Also, high rate sand filters shall meet or be equal to the standards of the National Sanitation Foundation as specified in section 231.130.

(3) *Filtering material.* Filtering material shall consist of screened, sharp filter sand with an effective size between 0.4 and 0.55 mm, and a uniformity coefficient not exceeding 1.75, supported by at least ten (10) inches of graded filter gravel. Filter material must be at least twenty (20) inches deep for standard pressure sand filters, and at least twelve (12) inches deep for high rate sand filters. Anthracite having an effective size between 0.6 and 0.8 mm, with a uniformity coefficient of not greater than 1.8 may be used in lieu of the sand. The gravel shall effectively distribute water uniformly during filtration and backwashing. A reduction in this depth or an elimination of gravel may be permitted where equivalent performance and service are demonstrated.

(4) *Underdrain system.* The underdrain system shall be of corrosion resistant and enduring material, and so designed that the orifices or other openings will maintain approximately constant area. It shall be designed to provide even collection or distribution of the flow during filtration and backwashing.

(5) *Freeboard.* Adequate freeboard shall be provided between the upper surface of the filter media and the lowest portion of the pipes or drains which serve as overflows during backwashing to prevent loss of filter material.

(6) *Filter system.* The filter system shall be provided with influent and effluent pressure gauges or a filter mounted pressure gauge, backwash sight glass on the waste discharge line, and an air relief valve at or near the high point of the filter. The filter system shall be designed with necessary valves and piping to permit:

(a) Filtering to swimming pool;

~~(b) Individual backwashing of filters to waste at a rate of not less than fifteen (15) gallons per minute per square foot of filter area;~~

~~(c) Isolation of individual filters for repairs while other units are in service;~~

~~(d) Complete drainage of all parts of the system;~~

~~(e) Necessary maintenance, operation, and inspection in a convenient manner.~~

~~(7) Access to filters. Each pressure type filter tank shall be provided with an access opening of adequate size to permit maintenance.~~

~~(8) Dosage cover. Devices with reasonably accurate dosage control features shall be provided if coagulants are added ahead of filters.~~

~~(9) Tank. On pressure type filters, the tank and its integral parts shall be constructed of substantial material capable of withstanding continuous anticipated usage, and shall be designed for a pressure safety factor of four (4) based on the maximum shutoff head of the pump. The shutoff head for design purposes shall in no case be considered less than fifty (50) pounds per square inch.~~

**231.280. Diatomaceous earth type filters.** ~~(1) Area. Sufficient filtering area shall be provided to meet the design pump capacity as required by this section.~~

~~Filtering area, where fabric is used, shall be determined on the basis of effective filtering surfaces as created by the septum supports, with no allowances for areas of impaired filtration, such as broad supports, folds, or portions which may bridge.~~

~~(2) Rate of filtration. The design rate of filtration shall not be greater than two (2) gallons per minute per square foot of the effective filtering area without continuous body feed, and not greater than 2.5 gallons per minute per square foot with continuous body feed.~~

~~(3) Use of a body feeder. If a body feeder is required, the device shall be accurate within ten (10) percent and dependable, and shall be capable of continually feeding within a calibrated range, adjustable from two (2) to six (6) ppm, at the design capacity of the recirculation pump. The feeding of a diatomaceous earth through skimmers is prohibited.~~

~~(4) Construction of the filter. The filter and all component parts shall be of such materials, design, and construction as to withstand normal continuous use without significant deformation, deterioration, corrosion, or wear which could adversely affect filter operation. The filter shall be so designed and constructed, or provision made, to preclude the introduction of appreciable quantities of filter aid into the pool during precoating operations.~~

~~Where dissimilar metals, which may set up galvanic electric currents, are used in the filters, provision shall be made to resist electrolytic corrosion. The filters shall be designed in such a manner that they may be easily disassembled, with allowances made for adequate working space above and around the filter to permit the removal and replacement of any part and proper maintenance.~~

~~All filters shall be equipped for cleaning by one (1) or more of the following methods: back washing, air-bump assist back washing, spray wash (mechanical or manual), or agitation.~~

~~(5) Construction of the tank. The tank containing the filter elements shall be constructed of steel, plastic, or other suitable material, which will satisfactorily provide resistance to corrosion, with or without~~

coating. Pressure type filters shall be designed for a minimum working pressure of fifty (50) pounds per square inch with a four (4) to one (1) safety factor. Vacuum type filters shall be designed to withstand the pressure developed by the weight of the water contained therein, and closed vacuum type filters shall, in addition, be designed to withstand the crushing pressure developed under a vacuum of twenty five (25) inches of mercury with a safety factor of 1.5 in both instances. The septa or elements which support the filter aid shall be of corrosion-resistant material. The septa shall be constructed to be resistant to rupture under conditions of the maximum differential pressure between influent and effluent which can be developed by the circulating pump, and be of adequate strength to resist any additional stresses developed by the cleaning operation.

(6) *Filter plant.* The filter plant shall be provided with such pressure, vacuum, or compound gauges as are required to indicate the condition of the filter. In vacuum type filter installations where the circulating pump is two (2) horsepower or higher, an adjustable high vacuum automatic shutoff shall be provided to prevent damage to the pump by cavitation.

(7) *Rapid draining of the filter.* Provisions shall be made for completely and rapidly draining the filter.

**231.290. Cartridge type filters.** Cartridge type filters shall be sized for a maximum flow rate of .375 gpm/sf. A pressure gauge and an air relief valve must be provided. A spare set of cartridges must be provided, and kept on hand at all times.

**231.300. Disinfectant and chemical feeders.** The swimming pool shall be equipped with a chlorinator, hypochlorinator, or other disinfectant feeder or feeders which meet the following requirements. They shall be of sturdy construction and materials which will withstand wear, corrosion, or attack by disinfectant solutions or vapors and which are not adversely affected by repeated regular adjustments or other conditions anticipated in the use of the device. The feeder shall be capable of being easily disassembled for cleaning and maintenance. The design and construction shall be such as to preclude stoppage from chemicals intended to be used or foreign materials that may be contained therein. The feeder shall incorporate failure proof features so that the disinfectant cannot feed directly into the swimming pool, the pool piping system, water supply system, or the swimming pool enclosure under any type of failure of the equipment or its maintenance.

They shall be capable of supplying at least the equivalent of one (1) pound of chlorine per eight (8) hours in each ten thousand (10,000) gallons of swimming pool capacity under conditions of operation to be anticipated at the proposed installation. They shall have a graduated and clearly marked dosage adjustment to provide flows from full capacity to twenty five (25) percent of such capacity. The device shall be capable of continuous delivery with ten (10) percent of the dosage at any setting.

When the disinfectant is introduced at the suction side of the pump, a device or method shall be provided to prevent air lock of the pump or recirculation system.

**231.310. Use of chlorine gas.** When compressed chlorine gas is used, the following additional features shall be provided:

- (a) The chlorine and chlorinating equipment shall be in a separate mechanically ventilated room, or a secured outside enclosure not over two (2) feet in depth, which is vandal resistant and naturally ventilated by means of openings in the upper and lower parts of the enclosure. When mechanical ventilation is installed, it must provide one (1) air change per minute when the room is occupied. The fan must be controlled by a switch located outside the room, and it must draw air from near the floor through a duct which terminates outside at a safe location. Fresh air must be allowed to enter in the upper part of the room. Such rooms shall not be below ground level and shall be provided with vents near the floor which terminate out of doors. The door of the room or

~~enclosure shall not open to the swimming pool, and shall open to the outside. The door shall be labeled "DANGER—GAS CHLORINE" in letters at least four (4) inches in height. City Commissioner approval shall be obtained for a variance of this item.~~

- ~~(b) The chlorinator equipment shall be of rugged design, capable of withstanding wear without developing leaks.~~
- ~~(c) All chlorine cylinders shall be anchored to prevent their falling over. A valve stem wrench shall be maintained on the chlorine cylinder so that the supply can be shut off quickly in the case of an emergency. The valve protection hood shall be kept in place except when the cylinder is connected.~~
- ~~(d) The chlorine feeding device shall be designed so that during accidents or interruptions of the water supply leaking chlorine gas will be conducted to the out-of-doors.~~
- ~~(e) The chlorinator shall be a vacuum-operated solution-feed type, capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere.~~
- ~~(f) The chlorinators shall be designed to prevent the backflow of water into the chlorine solution container.~~
- ~~(g) A gas mask designed for use in a chlorine atmosphere and of a type approved by the United States Bureau of Mines or the National Institute of Occupational Safety and Health shall be provided. In addition, replacement canisters shall be provided and a record shall be kept of gas mask usage to ensure that the mask will be serviceable when needed.~~
- ~~(h) The gas mask shall be kept in a closed cabinet, accessible without a key, located outside of the room or cabinet in which the chlorinator is maintained.~~
- ~~(i) Installation of chlorinator equipment and operation thereof shall be under the supervision of personnel experienced with installation and operation of such equipment.~~

**231.320. Use of hypochlorite solution.** ~~When a hypochlorite solution is used to be fed through hypochlorinator equipment:~~

- ~~(a) Feed shall be continuous under all conditions of pressure in the circulation system, and without artificial constriction of the pump suction line, whether this line is under vacuum or pressure head;~~
- ~~(b) Regulation shall be provided to ensure constant feed with varying supply or back pressure;~~
- ~~(c) Positive features shall be provided for preventing backflow from the recirculation system to the solution container and for reducing to a minimum the entry into the swimming pool of free calcium released from calcium hypochlorite; and~~
- ~~(d) Means shall be provided to prevent siphoning of hypochlorite solution when the recirculation pump and hypochlorinator are both turned off. (This applies to above swimming pool level installations only.)~~

**231.330. Use of erosion type feeders.** ~~An erosion type feeder shall meet the following requirements:~~

- ~~(a) Have sufficient capacity for achieving the required disinfectant residual;~~

~~(b) Be easily adjustable in output rate; and~~

~~(c) Be capable of continuous operation.~~

**231.340. Equipment for chemicals.** ~~Equipment and piping used to apply chemicals to the water shall be of such size, design, and material as to be nonclogging and easily cleanable; equipment of the positive displacement type is preferred. All material used for such equipment and piping shall be resistant to action of chemicals to be used therein. Protective equipment recommended by the chemical manufacturer must be provided for safe handling of any chemical.~~

**231.350. Lighting, ventilation, and electrical requirements.** ~~Lights shall be located to provide illumination so that all portions of the pool, including the bottom, may be readily seen without glare. Where underwater lighting is used, not less than 0.5 watts shall be employed per square foot of swimming pool water surface.~~

~~Area lighting shall provide at least ten (10) footcandles of illumination at all locations on the pool surface and on the deck within five (5) feet of the pool whenever the pool is available for use. Pools used for educational, training, or competition purposes must be provided with at least thirty (30) footcandles of illumination at the locations specified above.~~

~~All electrical installations shall conform with the applicable provisions of the latest edition of the National Electrical Code (article 680), as provided for in Minnesota Statutes, section 316.243 (1969) and the code of the Board of Electricity.~~

~~All indoor swimming pools, bathhouses, dressing rooms, shower rooms, and toilet spaces shall be adequately ventilated by mechanical means. For new installations, ventilation shall comply with the requirements of the Minnesota Building Code.~~

~~Pool equipment rooms must have natural or mechanical ventilation.~~

**231.360. Maintenance requirements.** ~~The swimming pool, swimming pool equipment, and appurtenances shall be maintained in a satisfactory operating condition.~~

**231.370. Dressing rooms.** ~~Bathhouses to be used simultaneously by both sexes shall be divided into two (2) parts separated by a tight partition, and must be designated for men or women. The entrances and exits shall be screened to break line of sight. Bathhouse floors shall be of a smooth finished material with a nonslip surface, impervious to moisture, and sloped to a drain. Junctions between walls and floors shall be coved. Walls and partitions shall be of smooth, impervious material, free from cracks or open joints. Lockers shall be set either on solid masonry bases four (4) inches high or on legs, with the bottom of the locker at least ten (10) inches above the floor. Lockers shall be properly vented.~~

~~The rules relating to bathhouses, dressing rooms, toilet facilities, and showers may be waived when such facilities are conveniently available to swimming pool patrons. However, when toilet facilities are accessible to pool users in the pool area, they must be accompanied by shower facilities.~~

~~Toilet and shower facilities shall be maintained in a clean and sanitary condition as defined in section 188.10.~~

**231.380. Toilets and showers.** Toilet, handwashing and shower facilities shall be provided on the basis of the following fixture schedule. Fixture schedules should be increased for swimming pools at schools or similar locations where bather loads may reach peaks due to schedules of use.

TABLE INSET:

	First 300 Males	First 300 Fe- males	Addi- tional Males Over 300	Addi- tional Fe- males Over 300
Toilet	1/100	1/50	1/200	1/100
Urinals	1/100		1/200	
Hand Wash Fixture	1/100	1/100	1/200	1/200
Showers	1/50	1/50	1/50	1/50

Drinking Fountain—Minimum of one (1) to be located in swimming pool area for pools over one thousand six hundred (1,600) square feet.

The layout of the bathhouse shall be such that the bathers on leaving the dressing room pass the toilets and showers enroute to the swimming pool. Showers shall be supplied with water at a temperature of at least ninety (90) degrees Fahrenheit at a rate of at least 2.5 gallons per minute. Thermostatic, tempering, or mixing valves shall be installed, if necessary, to prevent scalding of the bathers. The floor finish between the toilet and shower areas and the pool must be nonslip and nonabsorbent. At least one (1) shower must be available to all pool users which is conveniently accessible to the pool area when sauna or exercise facilities are provided. Toilet facilities which are used by pool users must include showers which permit taking a cleansing shower/bath in the nude.

**231.390. Safety requirement: lifesaving equipment.** (1) *Use of lifeguard platform.* Swimming pools operated primarily for unorganized use and having an area of more than two thousand two hundred and fifty (2,250) square feet of water surface area shall be provided with an elevated lifeguard platform or chair. In pools with four thousand (4,000) square feet or more of water surface area, additional elevated chairs or stations shall be provided, located so as to provide a clean unobstructed view of the pool bottom in the area under surveillance.

(2) *Equipment.* One (1) unit of lifesaving equipment shall consist of the following: A U.S. Coast Guard approved ring buoy to which shall be attached a sixty (60) foot length of one half ( 1/2) inch manila rope or equivalent and a life pole or shepherd's crook type of pole having blunted ends and a minimum length of twelve (12) feet. Where lifeguards are provided, a rescue tube may be used in lieu of a ring buoy. Not less than one (1) unit of equipment, as enumerated above, shall be provided at every public swimming pool, except a spa pool or wading pool. One (1) unit shall be provided for each two thousand (2,000) square feet of water surface area, or major fraction thereof, or each lifeguard on duty, whichever is greater.

Every pool, where a lifeguard is provided, shall be equipped with a first aid kit which shall be kept filled and ready for use and a back board, which must be stored within the pool enclosure.

The first aid kit must contain at least the following:

- 2 units—1" adhesive compress
- 2 units—2" bandage compress
- 2 units—3" bandage compress

~~2 units 4" bandage compress  
1 unit 3" X 3" plain gauze pad  
2 units gauze roller bandage  
1 unit eye dressing packet  
4 units plain absorbent gauze 1/2 sq. yard  
3 units plain absorbent gauze, 24" X 72"  
4 units triangular bandages, 40"  
1 unit bandage, scissors, tweezers  
1 pair rubber gloves  
1 pocket mask~~

~~(3) *Accessibility of equipment.* Lifesaving equipment shall be mounted in conspicuous places, distributed around the swimming pool deck, at lifeguard chairs, or elsewhere, readily accessible, its function plainly marked, and kept in repair and ready condition. Bathers or others shall not be permitted to tamper with, use for any purpose other than its intended use, or remove such equipment from its established location.~~

~~(4) *Warning sign.* Where no lifeguard service is provided, a warning sign shall be placed in plain view and shall state "Warning—No Lifeguard on Duty" with clearly legible letters at least four (4) inches high. In addition, the sign shall state "Children Shall Not Use Pool Without An Adult in Attendance" with letters at least one (1) inch high except wading pool signs may say "Parents Are Responsible For The Supervision of Their Children."~~

~~(5) *Starting block or platform use.* Section 231.240 pertaining to the use of starting blocks shall be enforced by the pool owner to provide for the safety of swimmers.~~

**231.400. Disinfection and quality of water.** ~~(1) *Disinfection.* Swimming pools, when in use, shall be continuously disinfected with a chemical which imparts an easily measured, free available residual effect. When chlorine is used, a free chlorine residual of at least 1.0 ppm shall be maintained throughout the pool whenever it is open or in use. If the concentration of combined residual chlorine exceeds 0.50 ppm, the pool must be superchlorinated or otherwise treated to oxidize and reduce the concentration to less than 0.50 ppm. When bromine is used, a bromine residual of at least 1.0 ppm must be maintained. (See 231.460 subd. 9 for whirlpools and spa pools.) If other halogens are used, residuals of equivalent disinfecting strength shall be maintained. A DPD (Diethyl-P-Phenylene Diamine) type testing kit for measuring the concentration of the disinfectant, accurate within 0.1 ppm, shall be provided at each swimming pool. The city commissioner may accept other disinfecting materials or methods when they have been adequately demonstrated to provide a satisfactory residual effect which is easily measured, and to be otherwise equally as effective under conditions of use as the chlorine concentration required herein, and not be dangerous to public health, create objectionable physiological effects, or impart toxic properties to the water. Where a cyanuric acid compound is used to stabilize chlorine, the concentration of cyanuric acid in the pool must not exceed one hundred (100) ppm.~~

~~(2) *Condition of the water.* The swimming pool water shall be maintained in alkaline condition as indicated by a pH of not less than 7.2 and not over 8.0. A phenol red type pH testing kit accurate to the nearest 0.2 pH unit shall be provided at each swimming pool. The alkalinity of the water shall be at least fifty (50) ppm as measured by the methyl orange test. The water shall have sufficient clarity at all times so that a black disk, six (6) inches in diameter, is readily visible when placed on a white light colorfield at the deepest point of the swimming pool. Failure to meet this requirement shall constitute grounds for immediate closing of the pool.~~

~~(3) *Sample check.* Where bacteriological sampling is done, not more than fifteen (15) percent of the samples collected over any considerable period of time shall either:~~



- (a) ~~Contain more than two hundred (200) bacteria per ml, as determined by the standard (thirty-five (35) degrees Celsius) agar plate count; or~~
- (b) ~~Show positive test (confirmed test) for coliform organisms in any of the five (5) ten (10) ml portions of a sample using the multiple tube fermentation method or more than 1.0 coliform organisms per fifty (50) ml when the membrane filter test is used.~~

~~All samples shall be collected, dechlorinated, and examined in accordance with the procedures outlined in "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). The city commissioner may collect and examine samples on a routine basis when the swimming pool is in active use.~~

~~(4) *Use of nontoxic chemicals.* Chemicals used in controlling the quality of water shall be demonstrated as imparting no toxic properties to the water.~~

~~**231.410. [Visible dirt.]** Visible dirt on the bottom of the swimming pool shall be removed every twenty-four (24) hours or more frequently as needed to maintain a clean pool.~~

~~Visible scum or floating matter on the swimming pool surface shall be removed every twenty-four (24) hours or more frequently as needed to maintain the pool clean.~~

~~**231.420. Supervision of swimming pools.** Every swimming pool shall be operated under the close supervision of a designated operator. The city commissioner shall require a certificate of competency obtained through attendance at and successful completion of a swimming pool operator's training course. Proper operating records, which shall include the following as required by the city commissioner, and shall be kept daily showing:~~

- ~~(a) Disinfectant residuals, including free chlorine and total chlorine;~~
- ~~(b) pH;~~
- ~~(c) Flow meter readings;~~
- ~~(d) Amounts of chemical used;~~
- ~~(e) Estimated volume fresh water added; and~~
- ~~(f) Maintenance (and malfunctioning) of equipment.~~

~~**231.430. Supervision of bathers.** A qualified lifeguard trained and currently certified by American Red Cross or equivalent in first aid and CPR, shall be on duty at all times the swimming pool is open to use by bathers except as provided in section 231.390, subdivision 4. Such attendant should be in full charge of bathing and have authority to enforce all rules of safety and sanitation. The following rules shall be enforced:~~

- ~~(a) All persons using the swimming pool shall take a cleansing shower bath, using warm water and soap and thoroughly rinsing off all soap suds before entering the swimming pool room or enclosure. A bather leaving the pool to use the toilet shall take a second cleansing bath before returning to the swimming pool room or enclosure. A person who exercises or uses a sauna or steam room shall shower again before using the pool.~~

- ~~(b) Any person having an infectious or communicable disease capable of being transmitted through use of the pool shall be excluded from a public swimming pool. Persons having any considerable area of exposed subepidermal tissue, open blisters, cuts, etc., shall be warned that these are likely to become infected and advised not to use the pool.~~
- ~~(c) Spitting, spouting of water, blowing the nose, etc., in the swimming pool shall be strictly prohibited.~~
- ~~(d) No running and boisterous or rough play, except supervised water sports, shall be permitted in the pool, on the runways, diving boards, floats or platforms, or in dressing rooms, shower rooms, etc.~~
- ~~(e) Glassware or similar materials having a tendency to shatter upon impact shall not be allowed within the swimming pool enclosure area.~~
- ~~(f) Diving is not permitted, except in diving areas complying with section 231.450.~~
- ~~(g) Suitable placards and pictorial representations, where appropriate, embodying the above regulations and instructions shall be conspicuously posted in the swimming pool room or enclosure and in the dressing rooms at all swimming pools. The shower requirements must also be posted in the dressing rooms. Lettering for all signs shall be clearly legible and at least three sixteenths of an inch high.~~
- ~~(h) Children in diapers are expected to wear plastic pants with tight closure.~~

**231.440. Closure of pools.** ~~When any of the following conditions are found, any public swimming pool shall be immediately closed to use when so ordered by any authorized representative of the city commissioner and must be placarded by the owner with the appropriate wording to indicate that it has been closed:~~

- ~~(a) The proper number of units of safety equipment are not provided.~~
- ~~(b) The clarity is such that a black disc, six (6) inches in diameter, is not readily visible when placed on a white --light color field at the deepest point of the pool.~~
- ~~(c) The disinfectant residual is found to be below the acceptable levels established in section 231.400.~~
- ~~(d) The pool has been constructed or physically altered without approval of plans as required in section 231.30.~~
- ~~(e) Any other condition which endangers the health, safety, or welfare of the public.~~

~~The pool shall remain closed until the conditions are corrected and followup observations made by an authorized representative of the city commissioner.~~

**231.450. [Dimensions of diving area.]** ~~The dimensions of the diving area on all swimming pools shall conform to the dimensions as approved by the state commissioner as it may subsequently be amended.~~

**231.460. Whirlpools and spa pools.** ~~(1) Whirlpool and spa.~~ For the purposes of this chapter, whirlpool and spa pool are synonymous. Spa pools must comply with all provisions of sections 231.10 through 231.440 except as modified in this section.

~~(2) Recirculation.~~ The recirculation system must recirculate a water volume equal to the pool volume in thirty (30) minutes or less, except that a minimum rate of thirty five (35) gpm is required.

~~(3) Inlets.~~ The recirculation system must have at least two (2) remote inlets to the pool.

~~(4) Main drain.~~ The main drain must consist of a grate covered bottom opening at least one hundred (100) square inches in size, or a bottom opening with an antivortex cover.

~~(5) Agitation.~~ An agitation system must have a separate pump, and if sidewall suction fittings are used, at least two (2) shall be provided.

~~(6) Timer.~~ An agitation system must be controlled by a timer with the control switch accessible to bathers, but at least five (5) feet from the pool. The maximum time setting must be fifteen (15) minutes.

~~(7) Access.~~ Access to the pool must be provided by the following:

~~(a) An unobstructed deck at the pool elevation which extends at least five (5) feet from the pool around the entire perimeter.~~

~~(b) Where item (a) cannot be complied with, the five (5) foot deck at the pool elevation must extend along at least ten (10) feet or twenty five (25) percent of the pool perimeter, whichever is less, and the remaining perimeter must be one (1) foot or less to the wall, partition or other effective barrier to restrict access. The deck must provide complete and unobstructed access to the steps in the pool.~~

~~(c) Where it is desired to provide access by sitting on the edge of a raised pool and swinging the legs into the pool, the deck dimension requirements of items (A) and (B) still apply, and the pool must be not less than eighteen (18) or more than twenty (20) inches above the deck. In addition, steps with equal risers and twelve (12) inch minimum treads must be provided outside of the pool which line up with the steps inside the pool. The pool edge must not exceed twelve (12) inches in width.~~

~~(8) Steps.~~ Steps for access to an elevated pool must have a handrail and must have a finished surface which meets the requirements for decks in section 231.210. Steps within manufactured spa pools are permitted a slight variation from the dimensions in section 231.210, subd. 2.

~~(9) Disinfectant.~~ The bromine residual or free chlorine residual must be at least 2.0 ppm throughout the pool when it is open or in use.

~~(10) Signs.~~ In addition to signs required elsewhere in these rules, signs relating to the following must be clearly visible in the spa pool area:

~~(a) Pregnant women, and those suffering from heart disease, diabetes, high or low blood pressure should not enter the spa except under advice of a physician.~~

~~(b) Avoid use while under the influence of alcohol or drugs.~~

~~(c) Observe a reasonable time limit, (e.g., fifteen (15) minutes). Long exposures may result in nausea, dizziness or fainting.~~

~~**231.470. License required.** No person shall operate or permit swimming in a public swimming pool, regardless whether a fee is charged for such use, without a valid public swimming pool license issued by the city council pursuant to this chapter. Issuance of public swimming pool licenses shall be governed by Chapter 259, 261 and 263 of this Code. Where a property has more than one pool located upon it, separate authorization shall be obtained for each pool, and the license fee shall be according to the fee schedule provided in this chapter. Minneapolis Park and Recreation Board and Special School District No. 1 shall be required to obtain licenses for public swimming pools which they own or operate; however, no license fee shall be charged.~~

~~**231.480. License fees.** The annual fee for a public swimming pool license shall be as established in Appendix J, License Fee Schedule.~~

~~**231.490. License expiration.** All public swimming pool licenses shall expire on March thirty first of each year, subject to renewal year to year thereafter.~~

~~**231.500. Revocation, suspension, nonrenewal of license.** The city council may revoke, suspend or refuse to renew a public swimming pool license for failure to comply with any of the provisions of this chapter, including the state health department rules incorporated herein, or for failure to comply with any other applicable provisions of this Code.~~